

Claims

What is claimed is:

- 1 1. A method for implementing intelligent spin-up for a disk drive comprising the steps of:
 - 3 receiving a command;
 - 4 checking for a disk drive start command;
 - 5 responsive to identifying said disk drive start command, checking a no-start flag; and
 - 7 responsive to identifying said no-start flag being set, returning an error code without starting said disk drive.
- 1 2. A method for implementing intelligent spin-up for a disk drive as recited in claim 1 includes the step of starting said disk drive only responsive to identifying said no-start flag not being set.
- 1 3. A method for implementing intelligent spin-up for a disk drive as recited in claim 2 includes the steps of monitoring said disk drive to identify a disk drive fault.
- 1 4. A method for implementing intelligent spin-up for a disk drive as recited in claim 3 includes the step responsive to identifying said disk drive fault, of checking whether said identified disk drive fault is a predefined dead device fault.
- 1 5. A method for implementing intelligent spin-up for a disk drive as recited in claim 4 includes the step of responsive to identifying said predefined dead device fault, setting said no-start flag and storing said error code.
- 1 6. A method for implementing intelligent spin-up for a disk drive as recited in claim 4 wherein the step of checking whether said identified disk drive fault is said predefined dead device fault includes the step of comparing a unit error code of said identified disk drive fault with a plurality of predefined dead device (DD) unit error codes (UECs) to identify a match.

1 7. A method for implementing intelligent spin-up for a disk drive
2 as recited in claim 1 further includes the steps of identifying a predefined
3 dead device fault, setting said no-start flag, setting a no-load flag and storing
4 said error code.

1 8. A method for implementing intelligent spin-up for a disk drive
2 as recited in claim 7 includes the step responsive to receiving said command
3 with said disk drive running and said transducer heads not being loaded,
4 checking said no-load flag.

1 9. A method for implementing intelligent spin-up for a disk drive
2 as recited in claim 8 includes the step responsive to identifying said no-load
3 flag being set, stopping said disk drive and returning said error code.

1 10. Apparatus for implementing intelligent spin-up for a disk drive
2 comprising:

3 a disk drive controller; said disk drive controller responsive to
4 receiving a disk drive start command, for checking a no-start flag;
5 said disk drive controller responsive to identifying said no-start flag
6 being set, for returning an error code without starting said disk drive; and
7 said disk drive controller for starting said disk drive only responsive to
8 said no-start flag not being set.

1 11. Apparatus for implementing intelligent spin-up for a disk drive
2 as recited in claim 10 wherein said disk drive controller for monitoring said
3 disk drive to identify a predefined dead disk drive fault; and said disk drive
4 controller responsive to identifying a predefined dead disk drive fault, for
5 setting said no-start flag, and for storing said error code.

1 12. Apparatus for implementing intelligent spin-up for a disk drive
2 as recited in claim 10 wherein said disk drive controller responsive to
3 identifying a predefined dead disk drive fault, for setting a no-load flag.

1 13. Apparatus for implementing intelligent spin-up for a disk drive
2 as recited in claim 10 wherein said disk drive controller responsive to
3 identifying said no-load flag being set with said disk drive running and
4 transducer heads not being loaded, for stopping said disk drive and returning
5 said error code.

1 14. A computer program product for implementing intelligent spin-
2 up for a disk drive, said computer program product including a plurality of
3 computer executable instructions stored on a computer readable medium,
4 wherein said instructions, when executed by a disk drive controller in the
5 disk drive, cause the disk drive controller to perform the steps of:
6 receiving a command;
7 checking for a disk drive start command;
8 responsive to identifying said disk drive start command, checking a
9 no-start flag;
10 responsive to identifying said no-start flag being set, returning an error
11 code without starting said disk drive; and
12 starting said disk drive only responsive to identifying said no-start flag
13 not being set.

1 15. A computer program product for implementing intelligent spin-
2 up for a disk drive as recited in claim 14 wherein said instructions, when
3 executed by a disk drive controller in the disk drive, further cause the disk
4 drive controller to perform the steps of:
5 monitoring said disk drive to identify a predefined dead disk drive
6 fault; and
7 responsive to identifying a predefined dead disk drive fault, setting
8 said no-start flag, setting a no-load flag and storing said error code.

1 16. A computer program product for implementing intelligent spin-
2 up for a disk drive as recited in claim 15 wherein said instructions, when
3 executed by a disk drive controller in the disk drive, further cause the disk
4 drive controller to perform the steps of:
5 receiving said command with said disk drive running and transducer
6 heads in said disk drive not being loaded; and
7 responsive to identifying said no-load flag being set, stopping said
8 disk drive and returning said error code.